

REMARKS

This is a response to the office action dated December 17, 2003. Claims 1-33 are pending and have been rejected. Claims 29,30, and 33 were indicated as being allowable if re-written in independent form.

Applicants have added claims 34-38.

Summary of Examiner's Action and Response

The Examiner objected to the specification as omitting headings. Applicants have amended the specification to include headings.

The drawings were objected to under 37 C.F.R. 1.83(a) as not showing every feature of the invention specified in the claims. As indicated below Applicants have addressed this objection.

Claim 1 was objected to because it included the phrase "characterized in that." Applicants have amended claim 1 to remove this phrase.

Claims 1-33 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for various phrases in claims 1 and 11. Claims 1 and 11 have been amended to address this rejection.

Claims 1, 2, 5-11, 15-17, 20, 23-25, and 32 were rejected under 35 U.S.C. 102(b) as being anticipated by UMETSU (4,627,803). This rejection is respectfully traversed.

Claims 3, 4, 12-14, 18, 19, 26, 27, and 31 were rejected under 35 U.S.C. 103(a) as being obvious over UMETSU (4,627,803). This rejection is respectfully traversed.

Response To Drawing Objections

The drawings were objected to under 37 C.F.R. 1.83(a) as not showing every feature of the invention specified in the claims. More particularly, the Examiner indicated that the subject matter of claims 3, 4, 7-10, 19, 26, 31, and 32 were not shown in the drawings.

Regarding claim 3, Applicants have added new Figure 9. Figure 9 is essentially the apparatus of Figure 3 rotated at an angle. No new matter has been added as claim 3 serves as part of the original disclosure.

Regarding claim 4, Applicants have added new Figure 10. Figure 10 is essentially the apparatus of Figure 3 rotated at a perpendicular angle. No new matter has been added as claim

4 serves as part of the original disclosure.

Regarding claim 7, Applicants point out that Figures 2 through 6 show a trough centered about an axis 6. Applicants respectfully suggest that this objection should be withdrawn.

Regarding claim 8, Applicants have added axis 6' to Figure 3 showing a trough not centered about axis 6'. No new matter has been added as claim 8 serves as part of the original disclosure. Regarding claim 9, Applicants have added new Figure 11. Figure 11 is essentially the apparatus of Figure 3 with a second trough 13' added. No new matter has been added as claim 9 serves as part of the original disclosure.

Regarding claim 10, Applicants note that Figure 11 also shows each trough having a feed means 4, 4'. No new matter has been added as claim 10 serves as part of the original disclosure.

Regarding claim 19, Applicants have added in Figure 6 feed means 90 to collector means 21. No new matter has been added as claim 19 serves as part of the original disclosure.

Regarding claim 26, Applicants have added new Figure 12. Figure 12 is based on Figure 4 but with two axes of rotation. No new matter has been added as claim 26 serves as part of the original disclosure.

Regarding claim 31, Applicants have added to Figure 1 a means for applying electromagnetic radiation or energy 100. No new matter has been added as claim 31 serves as part of the original disclosure.

Regarding claim 32, Applicants have added to Figures 4 and 5 reference numeral 200 indicating a means for applying vibration. No new matter has been added as claim 32 serves as part of the original disclosure.

Response to Rejection of Claims 1, 2, 5-11, 15-17, 20, 23-25, and 32

Claims 1, 2, 5-11, 15-17, 20, 23-25, and 32 were rejected under 35 U.S.C. 102(b) as being anticipated by UMETSU (4,627,803) citing to Figures 4-7 and column 3, lines 17-33. This rejection is respectfully traversed.

Claim 1 has been amended to make it clear that the “surface includes an undercut trough into which a majority of the at least one reactant is directly supplied by the feed means.” UMETSU does teach or disclose an apparatus where the “surface includes an undercut trough into which a majority of the at least one reactant is directly supplied by the feed means.” Instead, UMETSU shows “A conduit 11 for introducing an acetylene gas reactant. When the acetylene gas is introduced into vessel 1, catalyst 4 had previously been rotated by shaft 6 in an attempt to

create a film of catalyst 4 on walls 15 that the acetylene gas can react with and form a polyacetylene film. Unlike the claimed invention, a majority of the acetylene gas is not directly supplied into recess 16, but injected into the entire interior of vessel 1, distributing itself around the interior contacting the film of catalyst 4 attempting to produce the maximum quantity of polyacetylene film. UMETSU states, in pertinent part:

In operation for producing the polyacetylene film with the apparatus thus constructed as described above, the Ziegler-Natta catalyst 4 is stored in advance in recess A and the storage recess 16 of the vessel 1. The vessel 1 is then rotated by the shaft 6, thereby coating the catalyst 4 on the inner surface 1b' of the side wall and the film forming surface 5. In this case, the excessive catalyst 4 stored in the recess 16 flows down to the recess A from the outer periphery of the film forming surface 5.

Then, the rotating shaft 6 is stopped, acetylene gas is introduced into the vessel 1 from the conduit 12 under a predetermined constant pressure as described above, thereby polymerizing the acetylene gas with the Ziegler-Natta catalyst 4 coated on the inner surface 1b' of the side wall and the film forming flat surface 5 to produce the polyacetylene film 15.

Applicants respectfully submit that the limitations of claim 1 are not taught or disclosed by UMETSU. Accordingly, it is respectfully suggested that the rejection of claim 1 over UMETSU should be withdrawn. Because claims 2, 5-11, 15-17, 20, 23-25, and 32 depend directly or indirectly on claim 1, the rejection of these claims over UMETSU should also be withdrawn.

Response to Rejection of Claims 3, 4, 12-14, 18, 19, 26, 27, and 31

Claims 3, 4, 12-14, 18, 19, 26, 27, and 31 were rejected under 35 U.S.C. 103(a) as being obvious over UMETSU (4,627,803). Applicants adopt the arguments distinguishing claim 1 over UMETSU.

At most the cited references merely show that some elements of the claimed invention are old. "That all elements of an invention may have been old (the normal situation), or some old and some new, or all new, is however, simply irrelevant. Virtually all inventions are combinations and virtually all are combinations of old elements. A court must consider what the prior art as a whole would have suggested to one skilled in the art." Environmental Designs, Ltd.

713 F.2d 693, 698, 218 U.S.P.Q. 865, 870 (Fed.Cir. 1983), cert. denied, 464 U.S. 1043, 104 S.Ct. 709 (1984). "Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under [35 U.S.C.] Section 103, teachings of references can be combined only if there is some suggestion or incentive to do so." ACS Hospital Systems v. Montefiore Hospital, 221 USPQ 929, 933 (CAFC 1984) and cases cited therein (emphasis in original).

Applicants have carefully examined these patents, and can find neither teaching nor suggestion why it would be obvious to somehow modify UMETSU to obtain the claimed invention. Furthermore, UMETSU actually teaches away from the claimed invention by teaching injection of the acetylene gas after the Ziegler-Natta catalyst 4 has been coated over the interior of the vessel 1 for inner surface 1b'.

Because claims 3, 4, 12-14, 18, 19, 26, 27, and 31 depend directly or indirectly on claim 1, the rejection of these claims over UMETSU should also be withdrawn.

Claims 34-38 are respectfully submitted to be allowable because the art does not show a plurality of axes of rotation (claim 34) or a rotary impeller (claims 36 and 37).

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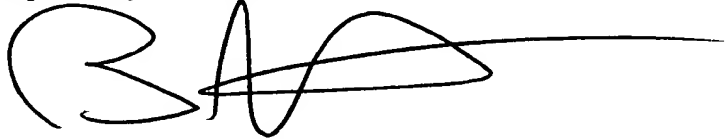
CONCLUSION

Should the Examiner feel that a telephone conference would advance the prosecution of this application, he is encouraged to contact the undersigned at the telephone number listed below.

Applicant respectfully petitions the Commissioner for any extension of time necessary to render this response timely.

Please charge any fees due or credit any overpayment to Deposit Account No. 50-0694.

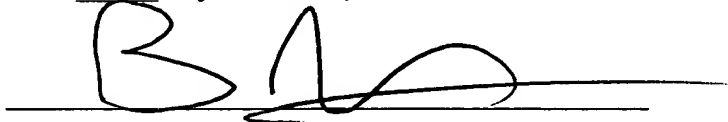
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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 15 day of March, 2004.



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